AMENDMENTS

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method, comprising:

receiving, at a subscriber interface line card, an analog signal from a POTS subscriber loop circuit;

quantizing the analog signal into a plurality of digital samples;

responsive to an SS7 query of a server that determines that a subscriber is an enhanced service subscriber, encoding, via high-quality audio codec instructions running on a digital signal processor installed on the subscriber interface line card, the plurality of digital samples, the codec instructions encoding multiple channel audio, the digital signal processor adapted to switch automatically between one or more high quality audio codecs and a POTS codec depending on:

capabilities of customer premises equipment at either end of a call comprising the analog signal, at least one piece of customer premises equipment exchanging adapted, via an exchange of network signals, to verify that a subscriber is using intelligent customer premises equipment, intelligent customer premises equipment capable of reproducing high fidelity voice signals having a frequency range that is wider than 3.1 kilohertz; and

capabilities of a network via which the plurality of digital samples are transmitted; and

converting, via conversion instructions running on the digital signal processor, the encoded plurality of digital samples into a plurality of VoATM packets, the high-quality audio codec adapted to encode an audio signal having a maximum frequency greater than 3.5 kilohertz.

2. (Currently Amended) The method of claim 1, wherein the high-quality audio codec instructions are compatible with G.722 and the encoded digital samples are transmitted via an ISDN BRI call that utilizes both A and B channels to provide a 127 kbps bearer channel.

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3. (Currently Amended) The method of claim 1, wherein the high-quality audio codec instructions are compatible with ITU G series codecs and the subscriber interface line card provides high quality encoding/decoding for both "on-net to on-net" calls and "on-net to off-net" calls through interworking with ISDN for negotiation of bearer capabilities between called and calling parties.

4. (Currently Amended) The method of claim 1, wherein the subscriber interface line card assumes a default high-quality audio codec capability of G.722, but is adapted to automatically substitute substitutes a Dolby Digital AC-3 codec for the G.722 codec upon learning that far-end customer premises equipment can handle Dolby Digital AC-3.

5. (Original) The method of claim 1, wherein the high-quality audio codec instructions are compatible with DTS.

6. (Original) The method of claim 1, wherein said encoding encodes multiple channel audio.

7. (Original) The method of claim 1, further comprising:
    automatically substituting PCM codec instructions for the high-quality audio codec instructions when a far-end CPE does not have high-quality audio codec capability.

8. (Original) The method of claim 1, further comprising:
    automatically substituting alternative high-quality audio codec instructions for the high-quality audio codec instructions.

9. (Original) The method of claim 1, further comprising:
    automatically substituting alternative high-quality audio codec instructions for the high-quality audio codec instructions based on a capability of a far-end CPE.

10. (Original) The method of claim 1, further comprising:
    automatically substituting alternative high-quality audio codec instructions for the

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high-quality audio codec instructions based on a capability of a far-end CPE's subscriber interface line card.

11.   (Original) The method of claim 1, further comprising:

automatically substituting alternative high-quality audio codec instructions for the high-quality audio codec instructions based on a capability of a network coupled to the subscriber interface line card.

12.   (Original) The method of claim 1, further comprising:

automatically substituting POTS audio codec instructions for the high-quality audio codec instructions.

13.   (Previously Presented) The method of claim 1, further comprising:

automatically substituting POTS audio codec instructions for the high-quality audio codec instructions based on a capability of a far-end CPE or subscriber interface line card of the far-end CPE.

14.   (Original) The method of claim 1, further comprising:

signaling between the subscriber interface line card and a far-end subscriber interface line card.

15.   (Previously Presented) The method of claim 1, further comprising:

signaling between the subscriber interface line card and a far-end CPE, the far-end CPE adapted to perform each function performed by the subscriber interface line card.

16.   (Original) The method of claim 1, further comprising:

obtaining a capability of a far-end subscriber interface line card or CPE.

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17.   (Original) The method of claim 1, further comprising:

  providing a capability of the subscriber interface line card to a far-end subscriber interface line card or CPE.

18.   (Original) The method of claim 1, further comprising:

  exchanging capability information with a far-end subscriber interface line card or CPE.

19.   (Currently Amended) A machine-readable medium storing instructions for activities comprising:

  receiving, at a subscriber interface line card, an analog signal from a POTS subscriber loop circuit;

  quantizing the analog signal into a plurality of digital samples;

  responsive to an SS7 query of a server that determines that a subscriber is an enhanced service subscriber, encoding, via high-quality audio codec instructions running on a digital signal processor installed on the subscriber interface line card, the plurality of digital samples into an LD-CELP format, the digital signal processor adapted to switch automatically between one or more high quality audio codecs and a POTS codec depending on:

    capabilities of customer premises equipment at either end of a call comprising the analog signal, at least one piece of customer premises equipment adapted, via an exchange ofexchanging network signals, to verify that a subscriber is using intelligent customer premises equipment, intelligent customer premises equipment capable of reproducing high fidelity voice signals having a frequency range that is wider than 3.1 kilohertz; and

    capabilities of a network via which the plurality of digital samples are transmitted; and

  converting, via conversion instructions running on the digital signal processor, the encoded plurality of digital samples into a plurality of VoATM packets, the subscriber interface line card adapted to pass the plurality of digital samples to an ATM Utopia bus.

20.   (Currently Amended) A system, comprising:

a POTS subscriber interface line card adapted to receive an analog signal from a POTS subscriber loop circuit and quantize the analog signal into a plurality of digital samples;

a high-quality audio codec installed on the subscriber interface line card, adapted to run on a digital signal processor coupled to the POTS subscriber interface line card, and adapted to, responsive to an SS7 query of a server that determines that a subscriber is an enhanced service subscriber, encode the plurality of digital samples into an LD-CELP format, the digital signal processor adapted to switch automatically between one or more high quality audio codecs and a POTS codec depending on:

capabilities of customer premises equipment at either end of a call comprising the analog signal, at least one piece of customer premises equipment adapted, via an exchange of exchanging network signals, to verify that a subscriber is using intelligent customer premises equipment, intelligent customer premises equipment capable of reproducing high fidelity voice signals having a frequency range that is wider than 3.1 kilohertz; and

capabilities of a network via which the plurality of digital samples are transmitted; and

a converter installed on the subscriber interface line card and adapted to convert the encoded plurality of digital samples into a plurality of VoATM packets, the subscriber interface line card adapted to pass the plurality of digital samples to an ATM Utopia bus.

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